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Agricultural.

CURING CLOVER HAY.

Clover hay, if properly cured, is undoubtedly the very best hay for farm stock—cattle, horses or sheep—which can be grown in this State. The only trouble is to cure it properly so as to preserve its best qualities. It is not until it is full bloom that it is very difficult to cure, as it is so full of moisture, but that is the very time when it makes the best hay. As it gets older the stems get coarse and woody, the blossoms dry and brown, and break up into small particles which irritate the throats of horses, and give people the idea that clover does not make a suitable feed for them. The hard stems cannot be eaten by stock and have to be thrown on the manure heap. In a good season, with a tender and plenty of help, clover may be cut at the proper time and secured without fear of becoming musty from excess of moisture. Musty clover makes bad hay, and one reason for the mustiness is that the clover was not properly cured. No one should cut clover in the morning and expect to haul it into the barn the same day, for if he does he will have musty clover hay beyond doubt. Clover contains a great deal of sap, and the thick stems of this plant part with it very slowly. Many times when clover looks dry enough to haul to the barn, if you twist the stems into a rope, you can wring out water from them. Clover, as a rule, should be mown in the afternoon, and be left in the swath overnight. The dew will not hurt it, only possibly blacken it a little. As soon as the dew is off in the morning, shake out the heavier portions, and when the surface is dry, rake into small windrows; shake these out a little if necessary, and soon after dinner the hay will do to go in. Cutting the clover and allowing it to lie on the ground over night gives the sap in the stems an opportunity to go in the leaves, and the process of evaporation soon dries the hay of this moisture. It should be well cured and the danger is in curing it too little, while in curing timothy the danger lies in curing it too much.

WHAT'S IN A NAME.

How common names originate and are multiplied, has frequently been called to my notice, especially since my connection with the State Agricultural College. *Plantago lanceolata*, the subject of a recent bulletin, is a native of Europe and has been extensively introduced into this country, where it is a prominent weed. In Great Britain it is called rib grass, ripple grass, narrow-leaved plantain—good and expressive and well known common names. After emigrating to this country, some farmer calls it "buck horn," another "black plantain." In this way arises much confusion and misunderstanding, as different common names are often given to a plant in different parts of the country. In Ohio, some one spends many years in carefully improving "a strain" of yellow dent corn, called there the Wilson corn. A Michigan man buys some of it in Ohio, of a man named Johnson, and forthwith he calls it the Johnson corn. Another Michigan man buys some well known and good sort of wheat of a negro in Ohio. When he gets it home to Lansing, he raises some and finds it good, and offers it for sale as Nigger wheat. There is no end to this perplexing multiplication of common names, which ought to be discouraged.

W. J. DEAL.

EXPERIMENTS WITH CORN.

Pruning the Roots—Deep vs. Shallow Cultivation.

Bulletin No. 11 of the Agricultural Experiment Station of the University of Wisconsin contains a report of some experiments conducted by Willet M. Hays, assistant in agriculture, for the purpose of ascertaining the effects of root pruning and deep and shallow cultivation upon the corn crop. As it is a seasonable topic in this State, we give the report in full:

In 1889 a trial was made to see what effect pruning the roots of corn would have on the crop of grain and fodder. In a field thirty-two rods long and eleven rods wide Rose Dent corn was planted in hills, with a check-row planter, and was cultivated with a shallow cultivator (Towers'). Twenty rows, running lengthwise near one side of the field, were chosen for the experiment. The roots of every alternate row were pruned as described below, while the even numbered rows alternating with them were untouched. The twenty rows were divided in the middle, thus giving two halves of twenty rows each. Eight one-tenth acre plots were then made, in the following manner: The first five odd numbered (pruned) at the south end, beginning at the west side, are called plot 1, and the first five even numbered rows alternating with them, constituted plot 2. So plot 3 was the five pruned rows in the southeast corner, and plot 4 the five rows alternating with them, and not root-pruned. Likewise, plot 5 was the five root-pruned rows in the north end, at the west side, while plot 6 was the rows alternating with them, and plots 7 and 8 were the five root-pruned and the five rows not pruned, in the north end, at the east side.

For pruning the roots, a strong butcher's knife was set into a piece of two by six scantling, fashioned into a runner, to slide on the ground. In front was a tongue, by which a man could pull the device, and behind, cultivator handles were placed, enabling another man to guide it. The knife blade was set in the runner so as to extend six inches into the ground, when the runner was on the surface of the soil. This implement was run along either side of the rows, six inches from the hills. Plots 1, 3, 5 and 7, were thus root-pruned, by going the long way of the rows, when the corn was seven inches high. On the same day the roots on plots 1 and 3 were more completely cut off by going across the field, skipping every other hill, so as not to disturb the even numbered rows on plots 2 and 4. This, of course, cut all the roots on plots 1 and 3 at a distance of six inches from the hills, on four sides, since all the main roots while the corn is at this age run in a nearly horizontal direction, unless the land is very dry.

When the corn was fifteen inches high, plots 1, 3 and 5 were again root-pruned the long way of the rows, and plot 1 was also root-pruned cross-wise. Passing on both sides of the hill being counted as one pruning, plot 1 was pruned four times, plot 3 three times, plot 5 twice, and plot 7 only once. The effect upon the growth of the corn was very marked. The difference in the size of the plants in the alternate rows at the south end of the field was so great that many persons whose attention was directed to the field, without knowing of the experiment, noticed that the even numbered rows were decidedly larger than those which had their roots cut off.

The table given below emphasizes the fact, now generally accepted, that deep, close plowing of corn is a source of great injury to the crop, which can be avoided by medium or shallow cultivation, cutting but few roots. The corn was not completely dry when hauled, but the weights compare correctly, since the shocks were uniform in size, and therefore equally well dried. The planting and cultivating was uniform over the entire field. Since the plots root-pruned and those not pruned were made up of alternating rows, planted with a check-rower, no difference of soil or planting existed, and the difference in yield can be attributed to the root pruning alone.

PLOT.	GRAIN.		FODDER.	
	Lbs.	Bu. per acre.	Lbs.	Tons per a.
1. Pruned 4 times.	254	34	355	1-6
2. Not root-pruned.	401	48	375	1-4
3. Pruned 3 times.	253	30	304	9-0
4. Not root-pruned.	417	50	305	1-2
5. Pruned 2 times.	286	39	300	1-3
6. Not root-pruned.	402	49	340	1-2
7. Pruned 1 time.	308	37	340	1-2
8. Not root-pruned.	399	48	321	1-3
Average of root-pruned plots.	293	35	339	1-3
Av. of those not root-pruned.	405	49	357	1-3

It will be observed that the difference in yield is more marked in those plots where the most root pruning was done. An average difference per acre of thirteen and one-half bushels of corn, and of one-fourth ton of fodder, against root-pruning, was astonishing, though a very careful study of the habits of corn roots during several years past has shown me that great injury is done them by deep, close culture with the ordinary four shovels, two horse corn cultivator, or with the "double-shovel" plow. Plowing deep and close to the hills is harmful at any time, but is especially so late in the season, as the larger roots developed late, as well as those which originated on the stalk earlier in its development, are severed.

In field L, which had also been cultivated

on the shallow plan, two rows, seventy-five rods long, were root-pruned, with the same instrument as above mentioned, five inches deep and eight inches from the hill. This was done just as the corn was "laid by," the knife being run on two sides of each hill. Two other rows by the side of these were hilled up with a hoe to the height of four inches; and still two other rows, separating the two pairs of rows above mentioned, were left untouched. The season immediately following was quite dry, though the corn grew rapidly. The table below shows neither good nor harm arising from hilling done at this time, when compared with the two rows not treated. The two rows root-pruned, however, show an injury amounting to nearly three bushels of corn per acre, from this apparently slight pruning of the roots, after cultivation had ceased.

Row.	bu. per acre.
1. Root-pruned.	58
2. Hilled.	60
3. Not touched.	60
4. Root-pruned.	57
5. Hilled.	61
Average of root-pruned.	57
Average of others.	60

The very best corn cultivator is the smoothing harrow. It should be diligently used until the corn is four or five inches high.

THE VARIOUS FAMILIES OF THE MERINO.

A Breeder Discusses the American, the Dickinson, and the Black Top.

From a letter received from a breeder of Dickinson Merinos, we make the following extracts. It was called out by the paper read at the New York meeting by the editor of the FARMER on the Merino of the future:

"The sheep that has added so much to the wealth of our country has been the Merino; and while many fine bred flocks have been ruined by crossing with coarse bred rams to get size, and, yet many regret their folly now. The Merino, in my view, don't want to be bred for size. Their great point, and what has given them such fame, is their fleece, and when wool was worth a dollar per lb., then the heaviest fleece possible was king of the day. But as time and circumstances change we must change with them. It is folly in this day, to try and breed such sheep. Yet you see hundreds and thousands of them, don't you know that you can not cut a wrinkle? No motion about it. Then why advocate a worthless article, even on the neck? Did you ever shear a Merino? If so you know the neck is the most difficult place to shear, and put wrinkles on it and you will need to be a good Christian if you don't follow Peter's example—curse and swear."

A wrinkle breeder told me the hide on a yearling that died weighed 35 lbs. Now don't you see that such loss in dressing will never do. No butcher can pay four cents for such hides, and sell them for 35 to 50 cents. Next is the grease that is sure to follow the breeding of wrinkles. Now, do you want a coat made out of grease? Why, no; then why feed a sheep to raise a lot of grease for the manufacturer, who will see that the consumer will pay for that waste. I am convinced that the day is past for this kind of breeding.

I am 35 years old, have been 25 years dealing with sheep. Have had quite a lot of experience. First bought some coarse grade sheep to raise mutton lambs. Well, of course the lice and snuffles sickened me out in four years. Poor, delicate flocks are the coarse sheep. Next I bought the Black Tops, and was very successful with them. They have good constitution and are good mothers. But they are a mongrel, sure. I have enough sense to know that. Yet the originators claim they are not. But my objection to them is, being a mongrel, I could not breed a uniform flock to save me, and they would not carry the wool over two years; then they get naked, and only clip six to eight lbs. of wool, eight to thirteen. This is the truth, and I have sold rams from \$30 to \$300, even at \$15 to \$35, but the men lost money on them, and I know it. They do make a good cross on the Merino, and I think to take the tops of their flocks, that much good could be done to the wool growers of Michigan. But all depends on the selection, or disaster will follow.

How do we keep density without wrinkles? I answer, we avoid density; to a certain extent our Merinos are not dense, like the Americans. Yet we have a dense fleece for smooth Merino. Length is one great important point. We want nothing less than three inches to meet the coming deluge wool demand. If we have a fleece 4½ inches long it don't need to be but half as thick as 3½ staple, don't you see. Then our sheep are so much healthier. We like just enough oil to keep the wool nice, and I don't want any bare bellies, no sir, nor do I want a large frame—100 lbs. ewe, 150 lb. ram, is enough. Then you can improve the Merino. I don't think the Creator ever intended the Merino to be wrinkly, or the size of a calf. I don't believe the right kind of a sheep is yet bred to fill the demands of progressive farmers. But I do think I have the flock to start this coming sheep from.

I detect deception, and the cuts of the Black Tops are misleading—a misrepresentation and a grand fraud. I was a breeder of note in the Black Top sheep, but have left them. They are in my opinion the worst mongrel bred line of Merinos in the world. You classed the Dickinson Merinos in your paper, with what you saw at Detroit,

and there was none there, so far as I know. We have been wronged, and, shall I say, slandered? I shall ask you to make a correction. Do not condemn the noble Dickinson until you see them. Our stock rams clip from 18 to 30 lbs., and my flock of 40 breeding ewes averages 10 lbs. of beautiful wool.

The coming sheep is one without any folds. This is where I think you fail in describing your model sheep. Let us watch which will be nearest correct in ideas in 10 years from now.

T. M. PAXTON.
McCOMB'S MILLS, PA.

SUGGESTIONS TO FLAX SEED GROWERS.

Mr. S. H. Stevens, of the Flax Seed Inspection Department of the Chicago Board of Trade, has issued a circular to growers of flax seed regarding the proper handling of the flax after cutting. The suggestions are sound and practical, and we give them in full:

To protect a matured field of flax by placing in stack at the proper time is a test of the acumen and thrift of the owner. It is the alert farmer who rises to a full comprehension of what the critical period of flax farming demands; his activity is stimulated by the knowledge that neglect or a slight delay in housing involves a depreciation in value, and that it might be the cause of the loss of his crop.

The solubility of flax seed in water is such that its exposure to rain, however slight, causes decreased weight and lessened value, while heavy and continued rains have frequently destroyed all that was left unprotected.

Flax seed that has been exposed in the field to the sun's rays until it is dry to brittleness, still holds a latent moisture, which will develop when the seed is confined in mass and result in heat and decomposition. The above will explain to the country shipper why so much of his new seed grades "rejected" and "no grade." A wagonload of uncurd seed—although dry to the touch—will, when placed in a car or warehouse, in warm weather, become damp and warm. Flax seed threshed when in the dry condition described above, is liable to be much broken and pulverized; the stock will also break and be intermixed with the seed, thereby increasing the impurity.

In the inspection analysis of such broken and pulverized seed much must be classed as impurity, to the detriment of the shipper. The above being true, the waste at the threshing floor must be very large. Look on the reverse side. Should rain fall on the flax exposed on the field while waiting for the machine or for other reasons, the straw becomes rotten and great difficulty is encountered in threshing, and the seed is unfit for storage and will not grade number one.

The reason why the western cultivator of flax annually breaks down the flax seed market by throwing thereon in sixty days one-half of the crop, and that largely unfit for storage, has been an unsolved problem, but the reason is found in that general but ruinous habit of threshing from the field—for to thresh is to sell.

Having described some of the attendant dangers of the matured flax crop, I will suggest how these dangers may be easily avoided.

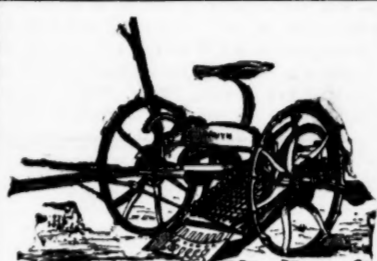
Well dried flax when stacked is reasonably secure, and is in position to yield a good return for labor. The sweat incident to stacking passes the seed to that indispensable condition necessary to storage. It also imparts a toughness to the seed covering, and straw, which protects the former from breakage by the machine and gives the latter a desirable plant tenacity.

With the million acres of flax grown in the West held well in hand, by reason of being gathered in barns and stacks, the owners, in place of breaking down the market, might control it, or, at least, they would be in a position to take advantage of any advance. The flax having been properly stacked, it becomes by easy transition, when threshing day comes, flax-straw stacks, retaining at least one-half the value it had before being deprived of the seed.

The coarse, unwinning flax-straw is a true storage, as it is eaten with avidity and relish by all kinds of stock, giving a vigorous growth to the young; a healthy, thriving condition to the full-grown, and a shining coat to all, which is admirable proof that its constituents are in harmony with their organization.

But the above is the least of its value. It has impoverished the farmer's acre, but is prepared to repay with interest. It is estimated that each acre of flax grown takes from the soil fifty pounds of alkalies and twenty pounds of phosphoric acid, which shows that it is a most exhaustive plant. The seed, which is the only part removed from the farm, contains but a small portion of the mineral matters taken from the soil, therefore the flax-straw retains nearly all the ingredients withdrawn. It is a natural sequestrant when it is fed to stock and returned to the land in the form of farm-yard manure, the equilibrium of its fertility is maintained.

These combined receipts of live stock at Chicago, Kansas City and Omaha, for the first six months of 1890, aggregated 2,556,553 cattle, 5,392,362 hogs, and 1,431,466 sheep, being an increase of 585,532 cattle, 719,541 hogs, and 360,431 sheep compared with the first half of 1889.



The Prun Potato Digger.

HARVESTING POTATOES.

In Michigan the potato crop is so important, and becoming more so every year, that anything pertaining to it is of general interest. The harvesting of the crop is both slow and laborious, and the many inventions so far offered to growers as a means of lessening this labor and reducing the cost of the work, have not so far answered expectations. Nearly all the appliances for digging the crop, which is the most laborious part of the work of harvesting, are either too cumbersome or fall in digging the crop clean. Inventors in this and other States have been at work on potato diggers for forty years past, and as yet have little to show for their long years of work and study.

This week we give a small illustration of a digger which is manufactured in the Empire State, where the potato crop is a very important one to farmers, and which is claimed to be the only reliable one yet offered to the public. We have never seen the machine at work, and hence cannot speak from a practical knowledge of its merits as a labor saving implement, but it is highly indorsed by numbers of large potato growers who have tested it and speak from practical experience. If it works as well as its friends claim it does with them, then the Prun Potato Digger will certainly fill a want of long standing. We can say that it looks like an efficient machine, is manufactured by reliable parties, and is well worth the attention of potato growers. Descriptive circulars of the machine may be obtained by addressing the Prun Potato Digger Co., Hooles Falls, N. Y.

DAIRYMEN AT THE DETROIT EXPOSITION.

S. J. Wilson, of Flint, who has been appointed Superintendent of the Dairy Department of the Detroit Exposition, asks the attention of dairymen to the very liberal premiums offered on butter and cheese. For these exhibits entries may be made as late as six o'clock p. m. Saturday, August 23d. A refrigerator with a glass front will be provided in which to exhibit the butter, so that it will be kept in nice condition throughout the exposition. The butter and cheese must be exhibited by maker, and all samples of butter not less than ten days old at the opening of the exposition, August 26th. The premiums offered on butter and cheese are as follows:

	1st Prize.	2d Prize.
Two factory cheeses.....	\$20 00	\$20 00
Two farm cheeses.....	30 00	15 00
Fifty pounds (or more) creamery butter.....	60 00	30 00
Fifty pounds (or more) farm dairy butter.....	50 00	25 00
Two pounds (or more) farm dairy butter.....	30 00	15 00
Package not less than five nor over ten pounds in net, for delivery, unbroken, to consumer.....	20 00	10 00
Three pineapple cheeses.....	10 00	5 00

Mr. Wilson, who is entirely competent for the position, will give every attention to exhibitors in this department, and all may be assured of ample facilities to exhibit their goods, as well as fair treatment. Michigan can make a big exhibit in this department if her dairymen choose to take the trouble, and where can they have a better opportunity to show the quality of their products to people from a distance than at this exposition? It is good business for them to be well represented. Why would it not be a good work for our State Dairymen's Association to take hold of, and lend its influence to secure a grand exhibit of Michigan's dairy products?

BUTTER SUBSTITUTES IN FRANCE.

Our Paris correspondent has been endeavoring to get at the facts in relation to the manufacture of butter substitutes in France; but he finds that manufacturers are not only averse to furnishing information but do all in their power to keep matters connected with the business a secret. In his last letter our correspondent says on this point:

"The extension of frauds in the butter-trade, by the substitution of margarine, is telling on the export dairy industry of France. There are five large factories in and around Paris alone, that prepare margarine; three of these place their outputs in the market, as a substitute-butter. I have never been able to gain admittance into any of these factories, to obtain, not any professional secret, but a general idea of how artificial butter was made. Margarine in itself, if prepared from beef suet, is not objectionable, provided the vendor does not assure you it is Isigny butter, and overcharge you 300 per cent. Now, mutton suet is being worked up; it is said that a process has been discovered for hardening lard. What becomes of all the fats from the horse-butcher's shambles? And the fats imported from Holland?"

"Despite severe laws, the margarine is adulterated, independent of the compound itself being palmed off as butter. Chemist

Munz is likely to solve the difficulty; he has just discovered a substance, harmless in itself, that dyes fats rose, and that no churning and no washings can change. A bill is being prepared for parliament, compelling all fabricators of margarine to color henceforth their products rose, under penalty of having their factories closed."

RISE AND FALL OF THE JERSEY.

In a recent issue the *N. Y. Times* had an article under this heading which is quite interesting in a historical way. It is, however, unfortunately marred by several blunders. In speaking of the Holsteins the article says that, though they were light milkers, by proper feeding their breeders found they could beat the Jersey record for a short period of time, but not for a year. If one thing is certain about the Holstein cow it is that she is a deep milker. It is also equally certain that the Jersey never was held up as a deep milker by her admirers—it was the wonderful richness of her milk, not its quantity, upon which her reputation was founded. She is pre-eminently a butter cow, and if she is not that she is nothing. Another inaccuracy is in referring to the sale of the cow Mocha for \$6,200 as the highest price ever paid for a cow at public auction. Why, dozens of Shortorns have sold for over \$10,000, a few for over \$20,000, and at least three for over \$30,000. In this State a number of Shortorns at the Avery & Murphy clearing sale brought over \$5,000, one reaching \$7,500. The reason given for the decline in price of the Jerseys is also inaccurate. The price declined because they were bred in such numbers as to overrun the demand from those who could afford to pay such prices, and they had to be sold at figures which would enable them to be used as dairy animals by those who followed that avocation as their regular business. The same causes have lowered the value of all other breeds of cattle. There will be ups and downs in all the improved breeds hereafter, but the extremely high prices possible while they were scarce are a thing of the past. It is not because of the knowledge that animals can be bred to make a record that Jerseys, or Shortorns, or Herefords are selling lower than ever before. It is because the breeders have produced them in sufficient numbers to more than meet the demand for highly bred animals, and they must hereafter largely rely upon their merits as producers of butter, milk or beef, when put under the hammer. But here is what the *Times* says:

"The question is often asked, why have Jersey cattle fallen so in price since 1885, and what gave them the speculative values between 1880 and 1885? Perhaps nobody in this city is better qualified to answer this question than Peter C. Kellogg, who first formulated and made public the butter records of Jersey cows in various parts of the country. Mr. Kellogg has been actively engaged in the business ever since Jersey were first imported into this country, and the publication of his articles giving their butter records aroused an interest among breeders that led in 1885 to the enormous price of \$6,500 being paid for a Jersey cow."

"Mr. Kellogg gives as the reason for the sudden falling off in price the discovery that by a subtle feeding of cow of inferior grade could be made to produce more butter than a cow of better breed without scientific feeding. This discovery has led many breeders to sell their herds, for while there is a rationalization about breeding an animal which in itself is superior, the charm comes when it is reduced to a matter of feeding. As soon as it became generally believed that fine blood did not bring with it everything, that the virtues of a cow lay not in spots or the color of the legs, breeders refused to pay these fancy prices."

"The man who first proved that a cow could be bred and fed into giving a large quantity and a richer quality of milk was V. E. Fuller, of Hamilton, Ont. Mr. Fuller obtained his ideas from a stud groom from England, who told him how light feeding horses could be built up by careful and scientific feeding. Mr. Fuller had a finely bred Jersey cow, Marianne of St. Lambert. He made a chemical analysis of milk and various foods and found that peas contained more butter fats than ordinary grain. He then fed his cow on pea meal, and to give her an appetite had her fed five miles each day during the winter, heavily blanketed. The result of this treatment was that when the American Cattle Club sent up an inspector it was found that the cow had completed a year's test and had produced 84 pounds 14 ounces of butter, against the 775 pounds one ounce of Eurota, the highest known record."

"A prominent breeder of this city attempted the same method with his cattle, but he unwisely began by walking his cows too far, with the result that they fell off in milk and became footsore. Eurotisma, the cow which has just broken the butter record for one year, with over 940 pounds, is an inside granddaughter of Mr. Fuller's cow."

"The owners of Holstein cattle took immediate advantage of this discovery that a cow could be fed for specific purposes, and though their cattle were light milkers, by proper feeding they found they could beat the Jersey record for short periods of time but not for a year."

"It requires careful and patient experiment to feed even pea meal with the best results, so many breeders become discouraged and sell their herds. Then pea meal is an expensive diet for cattle."

"About the year 1879 Jersey cattle were imported by E. P. Fowler, which cost him \$75 and \$80 a head for best grades, and these he sold for \$300 and \$350 a head. Ferdinand Ward bought one for \$360. Alfred B. Darling of the Fifth Avenue Hotel, was a pioneer in breeding fine Jersey cattle in this country. He imported two fine cows in 1875 in order to excel his partner, Parson Stevens, in dairy products. When Mr. Stevens died Mr. Darling bought the best cattle from his herd, among them Violet and Daisy, two famous cows. Mr. Kellogg urged Mr. Darling to make a butter test of his cattle, and Eurota tested twenty pounds in one week and 775 pounds in one year."

"Ex-Congressman Burnett conducted an

official test for the cattle club on Bombe, a two-year-old daughter of Eurota, and she produced twenty-one pounds, eleven ounces of butter in a week. People who laughed at such records were finally compelled to acknowledge that the Jersey was a butter cow was supreme. Mr. Kellogg labored diligently for two years to collect similar records; these he published. The result was that in 1880 the cow Myrah brought \$1,400 and the cow Lass Edith, \$1,425 at public auction. These were unheard of prices. In 1885 sixty-four Jersey cattle were sold at auction in the one day at an average price of \$1,200 each. In 1886 the yearling Bombe's Daughter sold for \$5,100 at public auction, and the cow Mocha brought the highest price ever brought for a cow at public auction—\$6,200.

"To-day, of course, speculative prices. \$5.00 pieces seldom go above \$10.00, and are grounded on a business basis of butter and milk producing capacity."

EUROPEAN CROP NEWS.

Berlin's Trade Circular of June 20th says of the crop prospects:

The weather this week has been mild but very unsettled. The wheat plant is not making the progress that is desired, and from present appearances harvest generally will be at least a fortnight later than the average; nor are the reports as to the condition entirely favorable. A leading farmer in Lincolnshire writes that the prospects are by no means brilliant. A hot, dry July may, of course, work wonders, but a "dripping" July will this season prove disastrous, predisposed as the plant seems to be to mildew and rust. In France, too, the reports have become very varied in tone, and distinctly less favorable than they were a few weeks ago. In the important wheat growing departments in the north the plant is backward, and at this particular season requires warmth and dryness. Cold, wet weather has already prejudiced the crop in the western departments. Belgium and Holland also want warmer weather, and Germany now begins to complain of rust in wheat and of injury by the recent frosts to the rye plant. The greatest falling off, however, seems to be in Hungary and Roumania—in the former country owing to the spread of rust, and in the latter country in consequence of the continued heavy rains. In South Russia, according to advices of the 13th inst., the prospect remained good in spite of a fortnight's wet weather; but unless there was a speedy improvement serious damage was anticipated. Reports from the Crimea, on the other hand, speak very unfavorably of the outlook, although it was expected that the spring-sown corn would partly revive with good rains. In Podolia heavy prospects are described as "good," and rye "splendid," and in Kiev the winter wheat crop is considered to be excellent.

A London dispatch of the present week represents the weather in England as wet and bleak to a degree which threatens the crops. The dispatch says hay is rotting on the ground, wheat is getting mildewed, the fields are being turned into ponds, and nothing is ripening. As for fruit, nearly all they get comes, like most other things, from abroad. They are more and more dependent on foreign supplies for provisions and delicacies of every kind. London is full of Americans and rural excursions end in the excursionists getting drenched. They are flying in despair to Paris, where the weather is not much better, though the amusements of the city are.

The Liverpool *Corn Trade Notes* in its European crop summary says: "With reference to the condition of the European crops albeit generally favorable, there is a somewhat disconcerting consensus of reports as to the prevalence of rust. We do not recollect hearing in any former year so many references to this often-times destructive fungus. It is to be sincerely hoped that the late unseasonable winter has not left as a legacy mildew and blight."

The Russian Minister of Finance recently issued a colored map showing the condition of the wheat and rye crops in European Russia on May 19. According to this map the north-eastern departments are all more or less unsatisfactory; the southern departments with one or two exceptions good, and the western provinces very good. Since that date heavy rains have fallen, which have somewhat impaired the outlook; for the winter sown crops, although no serious harm had so far been done, but a continuance of wet and cold weather would be very prejudicial. On the whole, therefore, it is doubtful whether the Russian crop this year will prove to be anything beyond, even if it reaches, a full average of say about 30,000,000 quarters.

WOOL SAMPLES.

MR. BEN. B. BAKER, of Lansing, sends us 10 samples of wool pulled from fleeces as sold in market without selection. They comprise a sample from a full blooded Cotswold ram, one year old, staple nine inches in length, and of good quality. The other nine are from cross-bred ewes. Cotswold and Merino—have a staple four to five inches in length, a nice light medium wool, and very desirable. Mr. Baker's flock of 73 averaged 5 lbs. per head, and stood at the barn for 33c per lb., an average of \$1.65 per head, without trouble of marketing.

MR. SILAS WASSOR, of Plainfield, Livingston Co., sends some samples from his flock of Merinos. The samples are from breeding ewes, have a four inch staple, light, well conditioned, and would all grade delaine or fine combing. It will be a nice wool to buy, but too good to sell in a country market where prices are generally on a dead level without reference to quality or condition. Mr. Wassor has certainly got some choice wool.

A Lapeer County farmer brings on an average of ten pounds per head on his hundred grade sheep.

The Horse.

RACE MEETINGS IN MICHIGAN

Grand Rapids	July 8 to 11
Baginaw	July 13 to 15
Detroit	July 20 to 22
Hamlet	July 27 to 29
Coldwater	July 30 to Aug. 1
Rockbridge	July 30 to Aug. 1
Marion	Aug. 5 to 7
Baginaw	Aug. 12 to 14
Port Huron	Sept. 2 to 5
Lansing	Sept. 10 to 13
Benton Harbor	Sept. 10 to 13
Port Huron	Sept. 13 to 19

THOROUGHBRED BLOOD IN TROTTERS.

[From Charles Marvin's book on "Training the Trotting Horse."]

As to thoroughbred blood in the trotter—that subject of endless discussion—I will try and give my views as briefly and as clearly as possible. Perhaps the best way to sum up my idea in a nutshell is to say that I want all the good thoroughbred blood that can be controlled. To say how much that may be is impossible. It is a matter of degree. In some cases about 50 per cent—with some mares he might fail to do it—while some horses do not have the ability to control it at all. I believe that Mr. J. C. Sibley has put the whole thing in as concise and as logical a form as possible in these words: "My judgment is that a horse will sire trotters from some of the purest blood, and that some horses cannot sire trotters from any thoroughbred."

My experience has been, in training horses from thoroughbred mares, that their heads are as good as the average trotting-bred horse's head. This experience has been, it is true, mostly with the get of Electioneer, a sire with great brain controlling force, and it may be that I handled the same number of half-bred horses by some other sire I might have found it different. However, I am not telling what my experiences might have been, but what they were. The only "ugly" half-bred one I ever had to deal with was Gratitude Russell. She was ill-used and whipped, and after she came into my hands I got her fairly gentle, though she always pulled.

As far as breaking is concerned, they are "good breakers." Palo Alto trotted in 2:12½ and 2:12½, with breaks in the mile, and you cannot afford to make a very bad break to finish in 2:12½. Ansel trotted a mile in 2:20, with a break in it. Gratitude Russell, Whips and Azore were good breakers. They would make a clear run and come back to the trot hardily. The only bad breaker in the lot was Express and he has improved.

The advantages of thoroughbred blood, as they seem to me, are that it gives higher finish, better quality of bone, better joints and superior wind and lung power. I do not base my claims for thoroughbred blood on gameness. My belief is that gameness comes in great part from pure, frictionless action. It is practically a truth that speed makes gameness.

"There are thoroughbreds and thoroughbreds." Some thoroughbreds have more trotting action than others. In selecting a thoroughbred mare to breed to a trotting stallion we may regard to form, action and head. Some thoroughbreds are more brainy and level-headed than others, and from one of these of the right conformation bred to a stallion like Electioneer, of a great brain and action-controlling power, the chances of getting a high class trotter are good.

I do not claim that you can get trotters as uniformly this way as by breeding from trotting mares, but you can, with the properly mated sire and dam, get horses of high-class by this line of breeding horses, of great finish and hard, fine quality. We have, I think, demonstrated at Palo Alto that some horses at least can control the action of the thoroughbred, and where that can be done I have no hesitation in declaring my preference for a good dash of thoroughbred blood.

I endeavor to regard all such matters without prejudice. I have no quarrel with trotting blood, nor have I any fault to find with breeders who stick to trotting blood. But I am not sure that all trotters come from all combinations, that there are more ways than one to breed them. I have no desire to argue that one way is better than another. I only insist that we have shown that high-class trotters can be bred with close and direct infusions of thoroughbred blood.

I do not advise any breeder to sell his trotting-bred mares and buy half-bred or thoroughbred mares, nor do I advise him to patronize a stallion simply because he has thoroughbred blood. But what I do advise is, that when you find a good horse or a good mare, a horse that is a trotter, or a mare that is a producer, that has plenty of thoroughbred blood, do not let that thing scare you away from him, but rather value them the higher for it. My idea is to recognize merit wherever you see it, and when a stallion trots in 2:12½, or even 2:20, you need not fear that his thoroughbred blood will stop his progeny from trotting.

Inquiries Answered.

BELLEVUE, Mich., June 27, 1890.

To the Editor of the Michigan Farmer.

You would oblige a number of your subscribers if you would give information in regard to the following horses:

Elizavete, Valley Chief, owned by Dan Elward, of Jackson. What was his breeding?

What was the weight and height and breeding of Vermont Hero?

He made several seasons in Michigan.

W. E. BROWN.

other Vermont Hero, registered as 323, but he was never in Michigan, unless he passed through the State on his way from Connecticut to Wisconsin.

Look After the Young Colts.

It is not only surprising but very remarkable the number of young foals lost for want of care. And it is difficult to find a semblance of reason, or business sense in the cause of such losses. A breeder will spend time, money and care in having his mare bred; will often treat her with the utmost care all winter long, on account of the foal she carries, only to neglect her at the critical moment, and allow the colt to perish for want of care and assistance during the first few hours (and often minutes) of its life. If it pays to breed a mare and care for her eleven months, it certainly pays to give still closer care and attention for a week or so, just at foaling time. Many foals come all right but are so weak they cannot get up and suck without assistance, and if left to themselves will often flounder around until exhausted, and die. In another case, the anxiety and nervousness of the dam results in the loss of the colt; and in other cases the colt fails to get a sufficient nutriment, gradually weakens and dies in a few days. Many other simple causes result in the loss of the foal, and in nearly every case proper care at the right time would result in saving it. A little extra care just at this time is the best investment a breeder can make, and is certainly the most profitable.

Horse Gossip.

FOR THE CONEY ISLAND CUP the great race mare Frenzy cut down the mile and a half record from 2:34 to 2:33, at Sheep-head Bay on Thursday last week.

C. M. HOWE, of Erie, Monroe County, has sold to James Dorrity, of Toledo, a yearling filly named Corinne, by Allie Wilkes, dam Mabel, by Howard's Mambrino. Price reported, \$900.

OURIN HICKOK and Charles Marvin have arrived in this city with their strings of trotters, to take part in the Detroit meeting. Among the lot are Palo Alto, Star of Adonis, Alfred S., and a number of youngsters.

L. J. ROSE, the California horse-breeder, has just received a large consignment of thoroughbred mares from Australia, which he will retain as breeders. They are from the most noted racing families of that far-off country.

THE fastest mile ever trotted in Australia was by Honesty, 2:13 3/4. Honesty is an American-bred, and was sired by Pagan 1795, dam Western Girl, by Chitina 721. Honesty had a record of 2:25 1/2 in this country, made at Stockton, Cal., in 1881.

THE Kalamazoo Stock Farm has 11 horses on the rack, mostly young ones. One of them, Quen Wilkes, by Jay Bird, four years old, is expected to start in the Horseman's Great Expectation Stake on July 22nd, at Detroit. See has a record of 2:29 1/2.

BALSORA WILKES, better record 2:17 1/2, by Wilkes Collins 394, dam Laura Bassett, by Balsora 124, is said to be a very awkward looking brute, standing over 15 hands high, and built like a dray horse. It seems good looks are not necessary for speed, nor always found combined with it.

THE Horse Breeder, of Boston, says it has excellent authority for stating that the chestnut gelding Roy, which won the six heat race at Philadelphia on the 31st of May, is by a son of Volunteer whose dam was strictly thoroughbred. His latest victory was the greatest that he ever won.

THE stallion Coroner, record 2:24, by Onward, dam Corby, by Pilot Jr. 12, is reported to have been purchased recently by the Pace Stock Farm, St. Louis, Mo., for \$2,000. If such an amount was paid, it was far in excess of the value of an animal without a record as a sire, and only a fair performer on the track. The figures were probably inflated.

At the spring trotting meeting at Vienna, Austria, on May 11, the American-bred horse Judge Davis 2:18 1/2 won the Austria Handicap, worth \$500 to the winner. The purse for trot in that country would not load the winners with riches. They are not equal to the amounts offered by county agricultural societies in many States in this country.

A KENTUCKY paper of late upon those reporting news to give at least the sire of the animal starting. With the multitude of unknown horses on the track, the only interest the general public can have in them is to know their breeding and thus enable them to determine the value of the stock from which they are bred as producers of speed. By all means let us know something of the breeding of all trotters and runners.

MR. W. H. HICKEY, of Lelaps, Ohio, has purchased two brood mares from parties at Leeper. One of these was bred by A. Mont Shesher 673, a son of Aumont 31, dam by Western Feargus 941, second dam by Maria Chata 15. The other mare is by Stetman, by Satelet 210. This is the party who recently acquired a trotting-bred mare through the FARMER. In answer to letters he visited Leeper, and purchased two, instead of one as he intended.

A. T. HALL, of Paw Paw, Van Buren Co., has purchased from R. F. Lakeman, of Kalamazoo, the trotting-bred stallion Ashland Prince 536, by Happy Medium 40, dam Jewel Krazy, by Standa 4 Boarer 1300, grand dam, the mare Joett, outcrossed. Ashland Prince is described as a bay horse, standing 13½ hands, and has a record as a three-year-old of 2:44½. Besides this horse Mr. Hall has the stallions Young Wilkes 951, and Winewood 4574, the latter a son of Nutwood 603 and Stence by Alexander's Abdallah 15.

SALVATOR, who won the Suburban at Sheep-head Bay, and the great stake race with Tenby reported in our last issue, is owned by J. B. Hegin, who purchased him as a yearling for \$4,500. He is now four years old, has started 15 times, losing three and winning 12. Up to the Suburban he had won for his owner \$7,000, and when the stakes for that race and the \$10,000 he won in his match with Tenby are added, it is probable he has won in all about \$18,000. He has proved a veritable gold mine for his purchasers.

CAN THIS BE TRUE? A special dispatch to the Tribune, of this city, from Paw Paw, Van Buren Co., contains the following: "James A. Jacob, a prosperous farmer living about four miles southwest of Lawrenceville, some ten years ago became possessed of a pair of the Normandy colts that he possessed and shut them up on a hard floor in his stable and vowed that they should never be allowed to run out again. All these years he has kept them tied up, never once allowing them to enjoy outdoor exercise. The matter has become common talk among the people, but none of the neighbors dared to interfere on account of the violent temper of the man. Yesterday, however, the sheriff and his deputy visited the place and found the animals securely tied in the stable that he had occupied so many years. Their feet are grown out and their hair is long and grown gray of old age. Jacobus was not arrested, but he promised to liberate the animals."

SENATOR STANFORD, who has made such a record as a breeder of trotters, also breeds a few thoroughbreds, and is apparently about as successful with them as with trotters. The past week he had one of them, a horse called Racco, entered in the mile race at Washington Park, Chicago. He had some good competitors, but won in the fast time of 1:41. Two days afterwards the same horse was entered in an extra race the mile against him being a very strong one. Racco went away from the first quarter to the head of the stretch, at which point he was let go, and went home an easy winner in the remarkable time of 1:30½, beating the record of Ten Brook a quarter of a second, made at Louisville, May 24, 1877. Time for different distances as follows: One-eighth mile, 1:34; one-quarter mile, 2:44; three-eighths, 3:54; half, 4:48; five-eighths, 5:51; three-quarters, 6:54; seven-eighths, 7:57; mile, 1:30½.

The Farm.

ONIONS FROM SCULLIONS.

To the Editor of the Michigan Farmer.

It is said corn meal cannot be made from sawdust, nor can a whistle be made of a pig's tail, but a very good shaped onion can be made from the worst kind of a scullion, by simply pulling it up when it becomes full grown and throwing it on the ground, when all the substance in the large, juicy stalk will descend to the root, forming a fine bulb, though by no means as fine texture as those raised from good seed. It would be better, of course, not to raise any scullions at all, but so long as the greed of seedsmen prompts them to set the entire crop for seed, when not one-quarter of it is fit for that purpose, more or less imperfect onions of the scullion type will be raised. Even where a careful selection of stock is made, the seed obtained from the first year or two may not be entirely pure, but perseverance will in time eradicate all imperfections. So with the best and the turnip; no thick, necked ones should ever be selected for seed, all such being coarse and stringy. "Like produces like."

J. S. TIBBITS.

Chickens.

Potatoes as a Farm Crop.

The American Cultivator says: By the proper and systematic cultivation of potatoes only a small proportion of any farm can be in this crop in any one year. It returns less to the soil than any other, and although it may not be more exhaustive than many other crops of equal or even smaller bulk, yet the fact that potatoes do not feed stock to swell the manure pile necessitates growing on other parts of the same farm the kinds of crops that. Potatoes are exhaustive of potash, and as sandy soil is deficient in that mineral, frequent cropping with potatoes without liberal manuring will soon destroy the ability of such land to grow crops. Very many sandy farms where potatoes have formerly been grown are in this condition. When clover will not catch on sandy soil try a dressing of wood ashes or potash salts, and all the better if plaster of Paris or sulphate of lime be added. Clover is a lime and potash plant. With these two minerals it must be a very light sand or clover will not thrive. The addition of potash is the best possible means of keeping these light sands from blowing away. The sand is in fine particles, lacking coherence from lack of potash. Add that and the two will form a crust over the surface that will prevent it from blowing away.

Locality has, however, as much or even more to do with success in growing potatoes as fitness of soil. The crop is bulky, and if it has to be taken far to market the expense of transportation, added to that for cultivation, takes away all chance for profit. The bulk of market potatoes for shipping must be grown within one or two miles of the shipping station. They may bear cartage farther than this when prices are high, but high prices in potatoes cannot be depended upon. The grower who sells at wholesale must sell the bulk of his crop as dug from the field and at the prices then ruling. If this price is very low, he may earn some profit for a rise; but even then nearest to the shipping station is a very important point. It is not generally known that potatoes are now forwarded in specially lined cars in even the coldest weather, where, whenever needed, a coal stove in the centre of the cars keeps them from freezing. Often, however, the potato grower tries or four miles from a station where potatoes are being received must wait days, or even weeks, before the weather or the roads will be right for him to remove them in wagons or sleighs. If the potatoes are within a mile or so of the station they may be taken to it or properly protected when the thermometer is down to 13° or even 14° above zero. Potatoes taken from a cellar and kept closely covered will retain enough heat to prevent freezing for a half-hour's trip to the station.

Why Frozen Clover is Unhealthy.

Dr. Law told those in attendance at the Brookport (N. Y.) farmers' institute why frozen clover is not good for stock: When clover is frozen and thawed out it ferments more freely. It is more indigestible. The bacteria which feed on the clover cause it to putrefy rapidly when eaten after being frozen. This putrefaction causes sickness. The first two stomachs suffer and break down the food, but the third stomach is the grist-mill to grind and make fine the food, while in the fourth stomach the red digestion takes place. Here the gastric juices are mixed with the food and the digestion is completed. A large amount of water is required for ruminating animals. The food in the rumen must be flaked so it can be returned to the mouth for additional mastication. For these reasons all ruminating animals require a great deal of water. The first two stomachs are supplied with water only by drink and saliva. Without water a cow may have a quantity of food in its stomach and still starve, because it cannot get the food into its stomach.

SPRINGING about varieties of wheat, and the importance of selection, it is suggested that in selecting seed wheat a good plan is to go into the field and reap with a sickle or cradle the grain from the earliest ripened spots, before the general harvest is begun. The farmer who will practice this method a few years will be greatly surprised at the result. The same holds good as to the selection of all kinds of seed.

A WESTERN agriculturist who sees the sun shine in spite of taxes and the bee combine, puts the question thus: "The practical question is not, is the American farmer suffering distress, but is the business of farming, considering the amount of capital investment and the labor required, yielding less return than an equal amount of capital and labor in other occupations? If all industries are alike depressed, it cannot be said that the farmer is in a worse position than the others."

AGRICULTURAL ITEMS.

FETH FENNER, a New York farmer, says the farmers do not work out their red-tail. It is mostly laid out in some shade spot. The red-tail is a sort of neighborhood picnic, a time when all the men and boys get together for a gossip.

AN Ohio man who has been looking into the dairy business a little, says one source of poor butter which demoralizes the Cleveland market is the home of the ignorant foreigner who never saw a cow in his native country, but keeps from one to three ill-fed, ill-kept beasts. The wife knows nothing of butter-making, and the alleged butter is a trifling worse than axle-grease.

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This foot thus left without water to float it, will mass and ferment, and thus remain until water is introduced sufficient to float it and soften it. When blotting occurs often, or habitually, it is a pretty sure proof of hardened food in the stomach. Animals which gulp up wind or blast after eating give evidence of hardened food, which by its fermentation throws off this gas. When this fermentation occurs in the lower stomach, and the gas cannot be thrown off by the mouth, there will be colic and constipation, and such stoppage as to cause death. There is a tendency to impaction in the third stomach when hay is fed which is dry and woody. There is a great deal of such hay this winter. When live stock are fed on such dry and woody hay they should be given water often. One of the best foods for stock to be fed with such dry food is ensilage. This food is succulent, and will help to moisten the more woody foods, such as straw and over-ripe hay. Load in paint or in other forms is a common source of poison. Plenty of salt is good. When there is stomach poison give a pound of epsom salt, and a pound of salt mixed for a large cow.

Give all the water they will take. For an impacted manure feed the same, and give 1-4 of a pound of salts every day for some time.

The Shortage in Steers.

To-day we discover that the country is absolutely desolate of steer cattle of suitable age for feeders. The entire list of corn-growing States is sterile, outside of the feeding pens. The range country has but few, and the demand is increasing daily. A practical feeder in Nebraska, who has been engaged in the business for eighteen years in that State and Iowa, told the writer only last week that he had ridden over three counties in Nebraska in search of feeding steers, and failed to secure a single animal over one year old. In order to get a small bunch of 125 he was compelled to take one-half of that number of hifers. These he is now feeding on corn for the market next winter.

A visit to the feeding yards throughout all of corn-growing States will develop the fact that in a very large proportion of them both heifer and steer yearlings are being grazed for the shambles. Why? Not because they are the most profitable, but because there is nothing else to be had. This is the direct result of the whole-sale slaughter of cows, calves and yearlings that has been going on for three years in every part of the United States, and the resulting shortage will become more and more apparent for the next three years. Growing out of this condition the price of cattle on foot must rapidly appreciate from month to month until there will come a veritable boom in all classes of beef animals. How high prices will go and when the top will be reached are questions no man can answer. That the history of the past will be repeated is certain, and that the day of return to low values is in the far future is equally certain. The men who get in at the present bottom prices are the men who will reap the reward.—Northwestern Live Stock Journal.

Roofs for Barns.

The farmers in attendance at a recent meeting of the Elmira Club gave the result of their various experiences with the roofs of barns and farm buildings. President McCann said very few roofs are properly built. C. Heller did not believe there is one roof in twenty that does not leak. C. Compton knew of many who used slate roofs who would not put them on again. President McCann said the slate gets loose and slides off. C. Heller said slate would last forever if they did not get broken and work out. He said it was impossible to make slate stay on if put over an old shingle roof. President McCann said if a tin roof would not last if painted and taken care of. C. Heller said if it would it kept well painted and well taken care of. Corrugated iron was preferred by some, and was nearly as cheap as shingles. J. McCann said corrugated iron costs from \$4.50 to \$5 a square, and requires to be kept well painted, the same as tin. C. Heller would replace an old shingle roof with shingle and an old tin one with tin. He did not think that good cedar shingles would last any longer than good white pine. He said it was impossible to make a tight roof of matched lumber. He had tried it a number of times, painted it thoroughly, but it would shrink and swell, crack the paint, and let the water through. J. D. McCann thought that asbestos roofing was good, lasts well and was fire proof. In answer to an inquiry, J. E. Collins said that tar preparations or other patent roofings were not worth putting on. G. N. Diven had a roof of tin which was good for nothing. D. T. Billings used a paint made by some patent process, claimed to be made of powdered slate—it would harden but was not good—it cracked off when exposed to frost. O. M. Wixom said if shingles are painted after they are put on, they will rot off just above the paint.

AGRICULTURAL ITEMS.

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SOME New York farmers are grumbling with good cause at being furnished with seed corn from a large seed firm in New York City which is badly infested with an insect known as the rice weevil. Dr. Lintner says if the insect is present in quantities, the corn would be unfit for seed. If only slightly infested, and not materially injured, further injury or danger could have been averted by subjecting it in a tightly covered barrel or bin to the vapor of sulphuric acid or carbon—the liquid needing only to be placed in an open vessel on the top of the corn, and in its volatilization, falling down from its weight, and destroying all the animal life present.

In the west, the nomadic sheep-grower is considered a public nuisance. With a band of 3,000 head, or two or three bands of 2,500 head each, his sheep patrol the streams of a district, and he is heard of, but not seen, in the choicest portions of the ranges, then seek new fields and pastures. The abandoned ranges are useless for cattle, and if used for other sheep generally produce a vicious epidemic of scab. To this heavy pasturing of watered districts, of large, dry, public ranges, can be attributed the original ill-feeling between cattlemen and sheepmen which has caused so many disgraceful encounters for the possession of public lands. Cattle will not willingly range upon a grazing district which has been closely grazed by sheep. The word "closely" is necessary to the statement, because it is the scull of the sheep that is offensive, and when a large band of sheep passes over a range the grazing is necessarily short.

The Poultry Yard.

Lice on Poultry.

Fanny Field, in the Prairie Farmer, says: Kerosene and lard will of course kill lice, but there is no use or sense in mixing them; either one will do the work alone, and if used carefully and sparingly the chicks will not be injured; but I would about as soon cut my chickens' head off as to grease them thoroughly with a mixture of lard and kerosene. The Persian or Dalmatian insect-powder is just as sure death to lice as kerosene or any grease; will not injure the chicks; and is ever so much nicer to use. If you have a lousy lot of little chicks, take the old hen just at night, hold her by the legs, hold downward, and dust about a teaspoonful of the powder well into her feathers, then put her back among her chicks; she will brood them and they will get their share of the powder in her feathers. Two applications a day or two apart will rid both ten and chicks of lice, and afterwards they will keep themselves free, if you keep the coop clean, and provide a dusting place.

But there is no need of having lousy chickens to begin with. If your hens are lousy you will of course have lousy chicks; but if your setting hens are free from lice the chicks will be free from lice before the chicks hatch. When you set a hen put her in a clean nest in a clean place—i. e., in a place not infested by lice; then dust her as I have told you, three times during the sitting period—the last time about three days before the chicks are due, and your hen and chicks will be free from lice to begin with, and they will stay free if you give them a chance to wallow in dust and keep the coops clean.

Bumble Foot.

This is a disease peculiar to the feet of fowls, and takes the form of an abscess following a skin-bore or scratch, sometimes caused by flying down from high perches, sometimes by a slight cut on the bottom of the foot by a bit of glass or sharp stone; inflammation sets in and pus forms under the skin. If taken early when the pus is in liquid form it can be opened with a sharp knife, the pus pressed out, the cavity syringed out with warm water slightly thickened with carbolic acid and if the place is kept open by poulticing for a couple of days it heals up. When the case is of long standing the matter becomes hard and "cheesy." The only way then is to lay the whole thing open with a sharp knife, making the opening large enough to press the core out, then bathe with warm water having a little carbolic acid in it, poultice for two or three days and bathe with a good liniment.

G. Q. Dow says, regarding feed for chicks from the time they are hatched till they get their growth: "I have experimented largely in this direction, and of all the feeds that I have used I can find nothing that equals stale bread. I do not mean sour, mouldy or dirty bread, but good clean bread, such as is left and accumulates at hotels and restaurants in our cities. I have no trouble in buying all I want in Boston, and I have it shipped to me in bags, as often as I wish. All that is required is to prepare it so to moisten it with either milk or water, just enough to make it crumbly, not wet or sloppy. This of itself is a fine feed, but if some beef scraps are added, mixing bread and scraps thoroughly together, the feed will fairly make the chickens jump in growth. This feed through the day and broken rice at night for a change, cannot be beaten. The cost of the same is two cents a pound, and at this price it is the cheapest food for chickens, taking results into consideration. I am aware that it costs twice as much as corn, but careful observation will teach anyone that the cheapest food per pound is not by any means the cheapest food for use. I can obtain far better results from one pound of the bread and scraps, as a feed for chickens, than I could with five pounds of corn feed. In fact I could not get the same healthy growth with any amount of corn."

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—AND—
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GIBBONS BROTHERS,

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DETROIT, SATURDAY, JULY 5, 1890.

This Paper is Entered at the Detroit Post-office as second class matter.

SPECIAL NOTICE.

To-morrow, July 4th, being a legal holiday, we go to press one day earlier than usual. All business houses will be closed, and the boards of trade have adjourned until Monday. Our market reports are therefore as late as if we had issued on Saturday morning as usual.

WHEAT.

The receipts of wheat in this market the past week amounted to 58,465 bu., against 62,015 bu. the previous week, and 43,670 bu. for corresponding week in 1889. Shipments for the week were 54,933 bu., against 65,188 bu. the previous week, and 41,909 bu. the corresponding week last year. The stocks of wheat now held in this city amount to 161,633 bu., against 165,395 bu. last week, and 48,646 bu. at the corresponding date in 1889. The visible supply of this grain on June 28 was 204,175 bu., against 198,719 bu. the previous week, and 15,300,715 bu. for the corresponding week in 1889. This shows a decrease from the amount reported the previous week of 913,634 bushels. As compared with a year ago the visible supply shows an increase of 4,744,176 bu.

The market has been doing better the past week, and closed yesterday at an advance of 1 1/4 c. on spot as compared with Friday last. The markets of Chicago, New York and St. Louis show a corresponding advance, while on futures the gain has been fully as much. The considerations which have caused this advance are various, but the unfavorable weather conditions in Great Britain and parts of Europe, and the prevalence of rust in some of the winter wheat States were largely responsible. Favorable weather might cause a set-back, but it is doubtful if, with present crop prospects, prices are not yet below a legitimate level.

The following table exhibits the daily closing sales of spot wheat in this market from June 10th to July 3rd inclusive:

	No. 1	No. 2	No. 3	No. 4
June 10	87 1/2	87 1/2	87 1/2	87 1/2
11	87 1/2	87 1/2	87 1/2	87 1/2
12	87 1/2	87 1/2	87 1/2	87 1/2
13	87 1/2	87 1/2	87 1/2	87 1/2
14	87 1/2	87 1/2	87 1/2	87 1/2
15	87 1/2	87 1/2	87 1/2	87 1/2
16	87 1/2	87 1/2	87 1/2	87 1/2
17	87 1/2	87 1/2	87 1/2	87 1/2
18	87 1/2	87 1/2	87 1/2	87 1/2
19	87 1/2	87 1/2	87 1/2	87 1/2
20	87 1/2	87 1/2	87 1/2	87 1/2
21	87 1/2	87 1/2	87 1/2	87 1/2
22	87 1/2	87 1/2	87 1/2	87 1/2
23	87 1/2	87 1/2	87 1/2	87 1/2
24	87 1/2	87 1/2	87 1/2	87 1/2
25	87 1/2	87 1/2	87 1/2	87 1/2
26	87 1/2	87 1/2	87 1/2	87 1/2
27	87 1/2	87 1/2	87 1/2	87 1/2
28	87 1/2	87 1/2	87 1/2	87 1/2
29	87 1/2	87 1/2	87 1/2	87 1/2
30	87 1/2	87 1/2	87 1/2	87 1/2
July 1	87 1/2	87 1/2	87 1/2	87 1/2
2	87 1/2	87 1/2	87 1/2	87 1/2
3	87 1/2	87 1/2	87 1/2	87 1/2

No. 2 white sold at 81 1/2 c. No. 3 white at 76 c. and rejected at 65 3/4 c. Rejected red closed at 65 3/4 c.

The following is a record of the closing prices on the various dates in futures each day during the past week:

	July	Aug.	Sept.
Saturday	87 1/2	87 1/2	87 1/2
Sunday	87 1/2	87 1/2	87 1/2
Monday	87 1/2	87 1/2	87 1/2
Tuesday	87 1/2	87 1/2	87 1/2
Wednesday	87 1/2	87 1/2	87 1/2
Thursday	87 1/2	87 1/2	87 1/2
Friday	87 1/2	87 1/2	87 1/2

The rains are interfering with haying, and if they continue, with the extremely hot weather of the past week, there will be plenty of rust in wheat.

The green aphids has appeared in the wheat fields of several of the southwestern counties of the State.

It is quite apparent that the more active buying by shippers is the result of less favorable crop conditions in Europe.

The Winnipeg Commercial says the June just closed was the most favorable growing month for the crop in the history of Manitoba.

The California outlook for wheat is reported to have greatly improved during the month.

Wet weather in England is reported to be general, and some cable reports state that the outlook for a crop is really poor. The fields are said to be flooded to an extent which stops growth of the cereals, while quantities of hay lie rotting on the ground and are spoiled beyond recovery.

Manitobans are said to be worrying over the question of how they are going to get their big wheat crop to market. They should first make sure of the "big crop."

The following table shows the quantity of wheat "in sight" at the date named, in the United States, Canada, and on passage to Great Britain and the Continent of Europe:

	Bushels
Visible supply	12,378,141
On passage for United Kingdom	28,254,000
On passage for Continent of Europe	6,000,000
Total	46,632,141
Total previous week	46,197,187
Total two weeks ago	45,271,181
Total June 1, 1890	45,703,094

The estimated receipts of foreign and home-grown wheat in the English markets during the week ending June 21 were 556,130 bu. more than the estimated consumption; and for the eight weeks ending June 7 the receipts are estimated to

have been 2,403,144 bu. more than the consumption. The receipts show an increase for those eight weeks of 1,488,932 bu. as compared with the corresponding eight weeks in 1889.

Shipments of wheat from India for the week ending June 21, 1890, as per special cable to the New York Produce Exchange, aggregated 530,000 bu., of which 330,000 bu. were for the United Kingdom and 200,000 bu. for the Continent. The shipments for the previous week, as cable, amounted to 520,000 bu., of which 440,000 bu. went to the United Kingdom, and 80,000 bu. to the Continent. The shipments from that country from April 1, the beginning of the crop year, to June 21, aggregated 5,380,000 bu., of which 3,840,000 bu. went to the United Kingdom, and 1,540,000 bu. to the Continent. For the corresponding period in 1889 the shipments were 6,140,000 bu. The wheat on passage from India June 21 was estimated at 2,696,000 bu. One year ago the quantity was 1,930,000 bu.

The Liverpool market on Thursday was quoted steady, with fair demand. Quotations for American wheat were as follows: No. 2 winter, 6s. 11d. per cental. No. 3 spring, 7s. 1d.; California No. 1, 7s. 0d. per cental.

CORN AND OATS.

CORN.

The receipts of corn in this market the past week were 11,441 bu. against 7,785 bu. the previous week, and 5,502 bu. for the corresponding week in 1889. Shipments for the week were 11,537 bu. against 8,365 bu. the previous week, and 11,749 for the corresponding week in 1889. The visible supply of corn in the country on June 28 amounted to 14,332,638 bu., against 15,021,330 bu. the previous week, and 9,490,334 bu. at the same date in 1889. The visible supply shows a decrease during the week indicated of 798,692 bu. The stocks now held in this city amount to 2,002 bu. against 7,083 last week, and 22,559 bu. at the corresponding date in 1889. The market was quiet and dull yesterday, and prices were lower than a week ago. Receipts are very light, but so is the demand, and the weather is making the plant grow so fast that no one wants any corn. No. 2 sold yesterday at 36 1/2 c. per bu., No. 3 at 34 1/2 c. at 3 1/2 c. No. 2 yellow at 37 c. and No. 3 yellow at 36 c. In futures No. 2 for August sold at 35 1/2 c. At Chicago corn was active yesterday, and advanced 1/2 c. on some grades. Spot is quoted there as follows: No. 2, 34 1/2 c.; No. 3, 33 c.; No. 4, 33 c.; No. 2 yellow, 34 1/2 c.; No. 3 yellow, 34 c. In futures quotations were as follows: No. 2 for July, 34 1/2 c.; August, 34 1/2 c.; September, 35 1/2 c.

The Liverpool market yesterday was quoted fair for spot, dull for futures. Quotations were as follows: Spot, 3s. 6 1/2 d.; July, 3s. 6 1/2 d.; August, 3s. 7 1/4 d. per cental.

OATS.

The receipts at this point for the week were 13,562 bu., against 21,294 bu. the previous week, and 32,657 bu. for the corresponding week last year. The shipments for the week were 15,247 bu. against 13,935 bu. the previous week, and 1,915 bu. the same week in 1889. The visible supply of this grain on June 28th was 5,010,672 bu., against 5,001,147 bu. the previous week, and 5,350,113 bu. at the corresponding date in 1889. The visible supply shows an increase of 99,524 bu. for the week indicated. Stocks held in store here amount to 11,858 bu., and 17,377 bu. the corresponding week in 1889. Oats are steady, and in fair demand.

No. 2 white sold yesterday at 33 c. per bu., light mixed at 32 1/2 c., and No. 2 mixed at 31 c. In futures No. 2 mixed for July sold at 30 c. August (new) at 27 1/2 c. It is generally believed by dealers that the crop will not be either as abundant or of as good quality as last year. At Chicago oats are fairly active, with values slightly higher on some grades. Quotations were as follows: No. 2 white, 30 1/2 c.; No. 3 white, 29 1/2 c.; No. 2 mixed, 28 1/2 c. per bu. In futures No. 2 mixed for July closed at 27 1/2 c., August at 26 1/2 c., and September at 25 1/2 c.

In the New York market yesterday oats were firmer than early in the week. Values are generally higher than a week ago except on No. 2 white spot. Quotations were as follows: No. 2 white, 35 1/2 c.; mixed western, 35 1/2 c.; white western, 35 1/2 c.; No. 2 Chicago mixed, 35 c. In futures closing prices for No. 2 mixed were as follows: July, 34 c.; August, 33 1/2 c., and September at 31 1/2 c. per bu.

DAIRY PRODUCTS.

BUTTER.

Yesterday receipts of butter were not so large, but a good deal was low-grade stock, which the warm weather did not improve. Good to choice dairy, when obtainable, was taken at 10 1/2 c., and even 13 c., but a good deal of low-grade stock could not be moved at any price. Creamery was quoted at 13 1/2 c., which shows a slight improvement since our last report. Other markets show signs of improvement, and appear to be recovering from the stagnation which has been general for the past six weeks. At Chicago trade is slack owing mainly to the excessively hot weather, which makes the handling of butter almost impossible without injury to the stock. Really fine goods are scarce and firm; the weather has been unfavorable for the production of first-class butter, and much has been heated and injured in transit. Hence the scarcity and firmness of fine-flavored goods. The poorer makes are abundant and weak. Quotations there were as follows: Egin district, or fancy separator goods, 15 1/2 c.; fine, 14 1/4 c.; good to choice, 13 1/2 c.; 13 1/4 c. for fine dairies, 10 1/2 c.; medium to fair, 8 1/2 c.; packing stock, fresh, 5 1/2 c.; old, 3 1/2 c. The New York market is firm and higher on first quality goods, which are scarce owing to the receipts showing the effects of the warm weather. Perfect Western creamery other than Egin is firm at 16 c., but the slightest defect causes a drop to 14 c., and free offerings at that fall to attract attention, and stocks are rapidly accumulating of all grades below fancy and prices widening out. Imitation creamery and Western dairy butter dull and barely steady. Factory butter dull and barely steady. Quotations in that market yesterday were as follows:

WESTERN STOCK.

Creamery, State extra, 10 1/2 c.; Creamery, State and Penn., seconds, 10 c.; to first, 13 c.

CHEESE.

Cheese is quoted easy in this market at a range of 8 1/2 c. per lb. for full cream Michigan, and New York would probably command a fraction more. The demand is light. In comparison with butter, however, the cheese-makers are doing remarkably well.

At Chicago the market is quiet and steady. Quotations there were as follows: Full cream cheddar, 7 1/2 c. per lb.; do. twins, 7 1/4 c.; Young American, 7 1/4 c.; 1-lb. skims, cheddar, 6 1/2 c.; 1-lb. skims, twins, 6 1/2 c.; hard skims, fat, 5 1/2 c.; imitation Swiss, 13 c. to 15 c.

The New York market is a shade lower, but the tone is fairly steady. Exporters are doing a good business, and the home demand for fancy goods keeps them reasonably firm at 8 1/2 c., while 5 1/2 c. as low as any really perfect stock can be had. Quotations yesterday were as follows:

State factory, full cream, choice, 8 1/2 c.; State factory, choice, full cream, 8 c.; State factory, good, full cream, 7 1/2 c.; State factory, fair, full cream, 7 c.; State factory, light skims, choice, 6 1/2 c.; State factory, light skims, 6 c.; State factory, skims, fine, 5 1/2 c.; State factory, skims, medium, 5 c.; State factory, full cream, 4 1/2 c.; Ohio factory, full cream, 4 c.

The exports of cheese from New York since May 1 (the beginning of the trade year) compare as follows:

For week ending July 1, 1890, 5,010,672 bu. Same week 1889, 4,312,270 bu. Since May 1, 1890, 17,041,464 bu. Same time last year, 15,367,077 bu.

At Utica on Monday there was an active competition, but a decline from last week's prices. The range of prices was from 7 1/4 c. to 8 1/2 c. The total sales footed up 19,142 boxes, against 16,353 the previous week, 19,899 corresponding day last year, and 20,833 two years ago. The report says:

"It was the intention to pay only 85 for top, but several salesmen came to the Board with that price bid by an outside buyer, and in some cases a fraction more, and the Board buyers were obliged to come up to these prices if they wanted to get the fancy lots. It is understood that considerable of the high-priced cheese goes to Montreal this week, and that fact is regarded as a favorable omen for the future. Weather is up in the eighties, production has not shrunk any at yet and factories show no disposition to hold their stock."

At Little Falls on Monday the range of prices was 7 1/4 c. to 8 1/2 c. Sales footed up nearly 10,000 boxes.

In Western New York the sales of combination cheese factories embraced 2,300 boxes Cloverfield and 1,800 Marshfield at 8 1/2 c.; 1,300 Springfield and 300 Net at 8 c.

The N. Y. Daily Bulletin of Wednesday says:

"Local operators are expressing considerable indignation over purchases of State cheese not only in the Northern counties, but in the State at large, by Montreal operators, on the supposition that this stock will be landed on the other side as Canadian product, and robbing our domestic product of the credit to which it is justly entitled. One factory at Utica brought 5 1/2 c. to go to Montreal."

If Montreal will pay more than New York she should get the cheese, and she is apparently getting it.

The Liverpool market yesterday was quoted dull, with light demand; quotations were 48s. 6d. per cwt. for finest colored and white New American, a decline of 2s. from the figures quoted a week ago.

State dairy, half-drain tubs and pails	13	214
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WESTERN STOCK.

Creamery, Egin, extra	16	1014
Creamery, other Western, extra	13	1014
Creamery, Western, first	13	1014
Creamery, Western, first	13	1014
Creamery, Western, first	13	1014
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WOOL.

The markets in the interior of this State have ruled dull and slow this week, with buyers offering reduced prices at most points. As a result many growers will not offer their clips at present, not being satisfied with present offers, and believing the future will develop an improvement in the demand and consequently in the price. The eastern markets are, as usual at this season, in a state of comparative stagnation. There is no doubt the force field made against the tariff bill in Congress is causing a weaker feeling in wool and woolsens. While it is generally believed the bill will finally pass with the wool schedule in its present form, the delay is allowing importers of woolsens to stock up with enormous quantities of foreign goods, which will naturally limit the demand for domestic goods for a time. It is, rather than the price of wool, which makes manufacturers so conservative in their purchases. The N. Y. Daily Bulletin, referring to this subject in its review of the woolen-goods trade, says: "So long as the present tariff uncertainties exist it is probable that present unsatisfactory conditions will prevail. A speedy determination of the McKinley bill matter, either one way or the other, is of vital importance to the trade at large." It also says in referring to foreign woolsens: "Importers are determined in their demands for advanced prices for fall goods of all classes and kinds, said prices to be contingent upon the passage of the McKinley bill." These items show just how the uncertainty regarding the future is affecting the woolen goods market, and naturally that for wool.

This feeling has led to a shading of values on all wools of last year's clip held at the east, and made buyers very conservative. It is not because wool is not wanted, but because of the future. Here is another item from a New York trade journal which shows how importers are preparing for the future:

"Under the stimulating influence of tariff probabilities, importers are displaying great activity, with the result that the value of imports at this port, and presumably at other

points, during the month of June is greatly in excess of the movement of a year ago. This is particularly noticeable in textile fabrics, the value of these imports, as a reference to our dry goods columns will show, being nearly double the value imported in June, 1889, with the greatest increases in manufacture of wool and flax, these goods being most affected by the proposed increases in tariff rates."

It is therefore in the interest of both domestic wool-growers and manufacturers, with all others indirectly interested in these industries, that Congress should push that bill through at as early a date as possible.

There is one thing certain. The importations of wool have fallen off very materially since appraisers began to apply the law as it was intended, and thus a stop to undervaluations and fraudulent entries of foreign wools. This is apparent in the following table, which shows the number of bales of wool imported into New York during the past week and since the 1st of January, as compared with the preceding year; also the receipts of domestic during the same period:

Imports week ending June 28, 1890, 1,000 bales. Imports since January 1, 1890, 52,471 bales. Imports same period 1889, 52,471 bales. Imports same period 1888, 70,609 bales.

Receipts week ending June 28, 14,385 bales. Receipts since January 1, 1890, 181,144 bales. Receipts same period 1889, 181,144 bales. Receipts same period 1888, 181,144 bales.

Of the eastern markets the following from the Boston Journal give a fair statement of the situation:

"Dealers are dissatisfied, it is needless to say, with the condition of the market, as their stocks are accumulating, and they feel that prices will be difficult to sustain. Still, it is not surprising that wool should sell at present prices, for a considerable portion of the woolen machinery of the country is idle, and will not be again actively employed for several weeks to come, or until the season for light-weight woolsens is fully opened and orders secured by the mills. It is hoped that this season will be a good one, so far as the distribution of goods is concerned, but manufacturers are almost settled in their convictions that no better prices than last year will be secured, and in this respect the future is not very promising. However, if there is a good demand for goods a large quantity of wool will be needed in their manufacture, and, as the mills are only moderately supplied with the raw material, we may anticipate a good movement in it, on the part of the mills, and wool manufacturers will doubtless be willing to pay without much hesitation. We do not consider, however, that the position of either goods or wool warrants any higher prices on the latter at present."

Latest reports from the London wool sales report an improved demand in fine Merino wools, suitable for this country, the result of purchases for the United States. The purchases by American manufacturers up to July 24th were 2,000 bales. We note one sale of Merino in the grease at 1s. 2d., about 30c. of American money. This is for clear wool, with neck, breech and belly wools thrown out. But the general run of prices for this description was from 5d. to 9d. per lb., 10 to 15s.

The range of prices at the east, taken from actual sales, is as follows:

Ohio and Pennsylvania

100

100

1992



